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Serial Number: 09/778,454

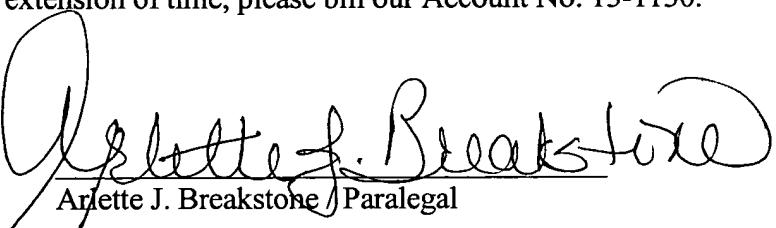
Our File No. 8988.3826

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

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Date: December 13, 2005

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AMENDED APPEAL BRIEF

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

December 13, 2005

In re application of : LU, Fumin
Serial No. : 09/778,454
Filed : February 7, 2001
For : **SPUNBOND FABRICS AND LOW LAMINATES FROM ULTRA LOW VISCOSITY RESINS**
Examiner : BOYD, Jennifer A.
Art Unit : 1771
Our File No. : 8988.3826

AMENDED APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P. O. Box 1450
Arlington, VA 22313-1450

Dear Sir:

Appellant submits this Amended Appeal Brief in triplicate as required by 37 C.F.R. § 1.192 pursuant to the Examiner's Notification of Non-Compliance Appeal Brief mailed November 28, 2005. A check in the amount of \$500.00 for the required fee pursuant to 37 C.F.R. §§ 1.192 and 1.17(f) for filing the brief was previously enclosed. A Notice of Appeal was filed on June 3, 2005. The Commissioner is authorized to charge any deficiency or credit any excess in these fees to Deposit Account No. 13-1130.

In re application: LU, Fumin
Serial No. 09/778,454
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REAL PARTY IN INTEREST

The real party in interest is Saurer GmbH & Co. KG.

RELATED APPEALS AND INTERFERENCES

Appellant's attorney is not at this time aware of any related appeals and/or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

This is an appeal from the Examiner's final rejection of claims 1, 3, 5, 7 and 8. Claims 2, 4 and 6 have been cancelled. The claims on appeal, claims 1, 3, 5, 7 and 8, are set forth in the Claims Appendix.

STATUS OF AMENDMENTS

No amendments have been submitted by Appellant subsequent to the Final Office Action of December 7, 2004.

SUMMARY OF CLAIMED SUBJECT MATTER

This invention is a spunbond fabric having desirable characteristics that is made from a spunbond process and, hence, can be termed a product by process. The spunbond process is described in appellant's U.S. Patent No. 5,688,468, a copy of which is attached hereto as Exhibit A. The raw materials used to produce the fabrics and the filaments that make up the fabrics are ultra low viscosity polymeric resins for polypropylene (PP) with a mass flow rate (MFR) well above 100 and polyethylene terephthalate (PET) resins with an intrinsic viscosity (IV) less than 0.55 or other fiber forming polymers with viscosity lower than that of fiber grade resins that are generally molecular weight and low crystallinity materials. This is described more specifically in page 3, lines 5 through 23 of the specification. The resulting resins with ultra low viscosity can be processed at lower temperatures and the filaments can be spun at higher velocities than that of the resins with a high viscosity (MFR) resulting in filaments of finer deniers produced as low as 0.2 dfp or lower. The invention with respect to independent claim 1 is discussed in the specification, page 5, line 15 through page 6, line 9 as Example 1. The desired characteristics of the fabric produced in Example 1 has a very soft hand and yet it has strong tenacity and also includes excellent barrier properties and air permeability. The spinning speed reached was 6,750 meters per minute. Claim 1 requires filaments speeds above 4,000 meters per minute.

With respect to independent claim 3 which deals with polyethylene terephthalate (PET), the specification on page 7, lines 6 through 13 discuss Example 4. The filament spinning speeds

were 6,900 and 6,500 meters per minute. Claim 3 requires filament speeds above 4,000 meters per minute.

With respect to independent claim 5, the specification on page 4, lines 11 through 17 discuss the resin of a polyamide (PA6) with a relative viscosity below 2.2 in a spunbond process of speeds above 4,000 meters per minute.

With respect to independent claim 7, Example 4 on page 7 of the specification discusses the use of a PET resin and multiple layers on page 5, lines 9-14.

Although different examples of different resins have been shown and claimed in the specification and the claims, the use of a specific spunbond process as described in appellant's U.S. Patent No. 5,688,468 using high filament speeds above 4,000 meters per minute and a ultra low viscosity polymer resin has resulted in a spunbond fabric having excellent characteristics as described in the specification.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. The first ground of rejection is whether the Examiner erred in rejecting claim 1 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Morini, et al. (U.S. Patent No. 5, 476,911).
2. The second ground of rejection is whether the Examiner erred in rejecting claim 3 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bansal, et al. (U.S. Patent No. 6,548,431).

3. The third ground of rejection is whether the Examiner erred in rejecting claim 5 under 35 U.S.C. 103(a) as being unpatentable over Lu (U.S. Patent No. 5,688,468) in view of Ofosu, et al. (U.S. Patent No. 6,268,302).

4. The fourth ground of rejection is whether the Examiner erred in rejecting claim 7 under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Bailey, et al. (W.O. 96/29460).

5. The fifth ground of rejection is whether the Examiner erred in rejecting claim 8 under 35 U.S.C. 103(a) as being unpatentable over Bailey, et al. (W.O. 96/29460).

ARGUMENT

First Ground of Rejection

The Examiner erred in rejecting claim 1 under 35 U.S.C. 102(b) as anticipated by, or in the alternative, under 35 U.S.C. 103(a) as obvious over Morini, et al. (U.S. Patent No. 5,476,911). Claim 1 is a product by process claim. Morini, et al. teaches a composition of matter, namely a crystalline propylene, homo-polymers and co-polymers that, among other attributes, have a melt flow rate (MFR) from 600 to 2,000 grams per ten minutes produced by the polymerization in the presence of a catalyst.

This is not the product claimed by appellant in claim 1. Appellant's claimed product in claim 1 is a spunbond fabric that results from a specific process included in claim 1. There is no

teaching either expressed or implied in Morini, et al. to produce the product that is the spunbond fabric claimed by appellant in claim 1.

The Examiner's interpretation of In re Thorpe, 227 U.S.P.Q. 964 (Fed. Cir. 1985) is flawed. The product referred to in the Thorpe case existed in the prior art. The holding of the case is that if the same product that exists in the prior art is produced by a new product by process, then the product is not patentable because the product exists already in the prior art.

Appellant's claimed product is a spunbond fabric that has not been found in the prior art by the Examiner. There is no product remotely similar to appellant's claimed product discussed in the Morini, et al. reference or anywhere else in the prior art. The reference in Morini, et al. to spun-bonded processes (column 1, lines 15 through 20) convey no information or teaching of appellant's claimed spunbond fabric but is a broad generalization without any factual basis. The references to "fast spinning processes" in Morini, et al. (column 3, lines 25 through 30) are not even related to a spunbond process and are vague and without any factual basis in describing appellant's claimed spunbond fabric. The fact is the Examiner's rejection under 35 U.S.C. 102(b) is without any legal or factual basis to show anticipation. Each and every element of the claimed invention is not expressed, suggested or implied in Morini, et al. The Examiner seeks an alternative rejection under 35 U.S.C. 103(a) as obvious over Morini, et al. Under the Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459 (1966) requirements for 35 U.S.C. 103, the Examiner's rejection has no basis in law or fact. The scope of the prior art cited is not relevant to appellant's claimed spunbond fabric in claim 1. A person of ordinary skill in the art would be in

the dark as to how to create appellant's spunbond fabric as claimed in claim 1 looking at the Morini, et al. reference. Finally, the Examiner boldly discards an important step in the product by process for treating PP and cavalierly suggests that the claimed spunbond spinning rate step of 4,000 meters/minute will not be considered. Appellant's reply is straight forward. Read appellant's specification to understand the invention. There is no basis for the Examiner to disregard a claimed step in appellant's process by product invention of claim 1. The structure implied by the process should be considered in reviewing the patentability of a product by process claim. Appellant's claim 1 asserts "excellent softness and strength" in the spunbond fabric. See In re Garnero, 412 F.2d 276, 279, 162 U.S.P.Q. 221, 223 (C.C.P.A. 1979).

Second Ground of Rejection

The Examiner erred in rejecting claim 3 under 35 U.S.C. 102(e) as anticipated by, or in the alternative, under 35 U.S.C. 103(a) as obvious over Bansal, et al. (U.S. Patent No. 6,548,431). Appellant concedes that Bansal, et al. shows a product manufactured as a spunbond with filament speeds above 4,000 meters per minute and with resins having an intrinsic viscosity of less than .55 from a spinneret. However, appellant asserts that the reference overall does not anticipate and, in fact, teaches away from appellant's invention in claim 3. Specifically, the Bansal, et al. reference uses two separate polymers to create a single filament. The polyethylene terephthalate claimed by appellant in claim 3 is the only component utilized. The reference did not realize or understand that a single resin of low viscosity can be used. Appellant has

discovered the claimed product with a spunbond process using a single polymer to create a filament. Because claim 3 uses the word “consisting,” the reference cannot be prior art as to anticipation. Further, the rejection under 35 U.S.C. 103 of obviousness is clearly negated by the fact that the reference teaches that you must use a combination of polymers for each single filament created. A person of ordinary skill in the art would not arrive at appellant’s claimed product reviewing the Bansal, et al. reference.

Third Ground of Rejection

The Examiner erred in rejecting claim 5 under 35 U.S.C. 103(a) as unpatentable over Lu (U.S. Patent No. 5,688,468) in view of Ofosu, et al. (U.S. Patent No. 6,268,302). Appellant has incorporated the Lu U.S. Patent No. 5,688,468 into the specification on page 3, lines 7 and 8. There is no teaching in the Lu ‘468 patent to employ an ultra low viscosity polymeric resin. In column 5, lines 38 through 51, Ofosu, et al. specifically limits the melt flow rate between 50 grams per 10 minutes and to about 150 grams per 10 minutes at a defined temperature. It is very clear combining Ofoso, et al. with Lu will not produce appellant’s claimed invention in claim 5. The fact is that appellant has used an ultra low viscosity resin not suggested in Ofosu, et al. in conjunction with generating filament speeds above 4,000 meters. The Examiner states that it would be obvious that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 U.S.P.Q. 215 (C.C.P.A. 1980). The range of constituents claimed in Boesch was overlapped by the prior art. The prior art was silent

as to a signal-like phase present in the composition. The present case with respect to claim 5 is completely different than the teaching in the Boesch case. In the present case, there is no overlapping of claimed values and, in fact, the viscosity values disclosed in Ofosu, et al. are extremely and significantly different and lower than the viscosity values claimed by appellant in claim 5 with respect to the relative viscosity below 2.2 for PA6 nylon. The Examiner is erroneously using hindsight to arrive at appellant's claimed invention. In re Rouffet, 149 F.3d 1350, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998).

Fourth Ground of Rejection

The Examiner erred in rejecting claim 7 under 35 U.S.C. 102(b) as anticipated by, or in the alternative, under 35 U.S.C. 103(a) as obvious over Bailey, et al. (W.O. 96/29460). Appellant's claim 7 is a product by process claim. The claimed product is a spunbond fabric having excellent softness barrier and air breathability. The fabric is made from a spunbond process that uses a polyethylene resin having a mass flow rate between 250 and 750 grams per 10 minutes. The product, that is the spunbond fabric, claimed by appellant in claim 7 is a product completely different than the product the Examiner cites as being described in the Bailey, et al. reference. The Bailey reference on page 10 refers to U.S. Patent No. 5,173,356 in line 26. (See Exhibit B.) This is listed as the most preferred form of fabric providing an adhesive binder for carpeting. A review of U.S. Patent No. 5,173,356 completely contradicts the Examiner's position. Specifically, the non-woven fabric described in the '356 patent uses a mass flow rate

(MFR) not exceeding 80 grams per 10 minutes. See the '356 patent on lines 41 through 48. The mass flow rates suggested in the '356 are not close to those required by appellant in claim 7.

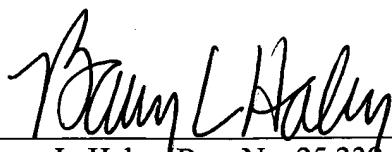
It is appellant's position that the Examiner's reliance on In re Thorpe, 227 U.S.P.Q. 964, 966 (Fed. Cir. 1985) is erroneous. In order to reject claim 7, the product must be in the prior art as required in the Thorpe case. Bailey, et al. does not teach the product that is claimed in claim 7. None of the prior art cited by the Examiner teaches a product that is claimed in claim 7. In fact, the reference relied upon in Bailey, et al. teaches away from appellant's invention using completely different mass flow rates. Again, whether it is under anticipation in 35 U.S.C. 102 which requires each and every element or process element or step for a proper rejection or under 35 U.S.C. 103, there is no teaching or suggestion in Bailey, et al. that would allow one of skill in the art to arrive at appellant's product as claimed in claim 7. The Examiner's rejection of claim 7 is clearly erroneous. Under 35 U.S.C. 103 obviousness, the reference must teach or suggest the combination. In re Geiger, 815 F.2d 1276 (Fed. Cir. 1987).

Fifth Ground of Rejection

The Examiner's rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Bailey, et al. (W.O. 96/29460). As discussed above in the Fourth Issue in which Bailey, et al. was cited as a reference and the fact that claim 8 depends from claim 7 which was discussed in the Fourth Issue, appellant reiterates the statements made above concerning the rejection of claim 7 and asserts the complete absence of any teaching in Bailey, et al. of the fundamental steps

required to produce the claimed spunbond fabric. Claim 8 merely adds creating a multiple layer fabric consisting of layers of the filaments of the resins that were produced in claim 7. The mass flow rates between 250 and 750 grams per 10 minutes as required in claim 7 and claim 8 are not suggested in a product produced through spunbonding as required in claim 7. Again, the reference in Bailey, et al. page 11 which cites U.S. Patent No. 5,173,356 is Bailey's most preferred form of fabric for providing the adhesive binder as a non-woven fabric. A review of U.S. Patent No. 5,173,356 reveals a product in which the mass flow rate does not exceed 80 grams per 10 minutes. It is appellant's position that a person skilled in the art could review Bailey, et al. thoroughly and would not find appellant's claimed invention in claim 8 which depends from claim 7 as being obvious.

Respectfully submitted,



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CLAIMS APPENDIX

CLAIMS APPENDIX

Claim 1. A spunbond fabric having excellent softness and strength, made from the spunbond process, including:

- (a) extruding filaments consisting of an ultra low viscosity polypropylene polymeric resin having a melt flow rate in grams/10 minutes at 230 degrees Centigrade between 350 MFR and 750 MFR from a spinneret;
- (b) drawing said filaments through a drawing unit;
- (c) generating a filament speed above 4,000 meters per minute;

and

- (d) creating a fabric consisting one or more layers of filaments extruded using the same melt flow rate resins between 350 and 750.

Claim 3. A spunbond fabric having excellent softness, strength, barrier properties and air breathability made from the spunbond process, including:

- (a) extruding filaments consisting of polyethylene terephthalate resins with IV (intrinsic viscosity) of less than 0.55 from a spinneret;
- (b) drawing said filaments through a drawing unit;
- (c) generating filament speeds above 4,000 meters per minute;

and

- (d) creating a fabric from one or more layers of filaments using the same resins.

CLAIMS APPENDIX

Claim 5. A spunbond fabric having excellent softness, strength, barrier properties, and air breathability made from a spunbond process, including the steps of:

- (a) extruding filaments consisting of polyamide (PA6 nylon 6) of a R.V. (relative viscosity) below 2.2 from a spinneret;
- (b) drawing said filaments through a drawing unit;
- (c) generating a filament speed above 4,000 meters per minute; and
- (d) forming a fabric consisting of one or more layers of similar filaments having a R.V. below 2.2 drawn from said unit.

Claim 7. A spunbond fabric having excellent softness, barrier properties, and air breathability made from a spunbond process, including the steps of:

- (a) extruding filaments consisting of polyethylene resin with a mass flow rate MFR between 250 and 750 grams/10 minutes at 230 degrees Centigrade from a spinneret;
- (b) drawing said filaments through a drawing unit; and
- (c) forming a fabric consisting of one or more layers from said filaments using the same resins.

Claim 8. A spunbond fabric as in claim 7, including the additional step of:

- (d) creating a multiple layer fabric consisting of layers of said filaments of the same resins.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.